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(54) Title: UNCOOLED CANTILEVER MICROBOLOMETER FOCAL PLANE ARRAY WITH MK TEMPERATURE RESO-  
LUTIONS AND METHOD OF MANUFACTURING MICROCANTILEVER

(57) Abstract: A microbolometer sensor has a first cantilever supported above a substrate and formed of a bimaterial so as to deform in a first direction in response to incident radiation, and a second cantilever supported above the substrate and formed of a bimaterial so oriented as to cause the second cantilever to deflect oppositely to the first cantilever in response to radiation. The first and second cantilevers have a spacing therebetween that varies as a function of radiation incident on said first and second cantilevers. Means for sensing the deflection of the first and second cantilevers to provide an indication of the incident radiation is provided. A process of forming a micromechanical cantilever structure is also providing by irradiating a cantilever with an ion beam, whereby the cantilever is flattened. Also, the cantilever can be annealed in a rapid thermal annealing process to flatten the cantilever.

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